What is claimed is:

1   1.   A data driver of a display forming an image frame
2   by sequentially scanning horizontal lines, the data driver
3   comprising:
4   a shift register receiving image data of three primary
5   colors in serial and outputting the image data of
6   the three primary colors in parallel within each
7   of scan durations of the horizontal lines;
8   a sample and hold register acquiring the image data
9   from the shift register;
10   a gamma multiplexer outputting gamma reference voltages
11   for the three primary colors in a sequence of the
12   primary colors within each of the scan durations
13   of the horizontal lines;
14   three   digital-to-analog   converters   for   gamma
15   calibration,   receiving   the   image   data   of   the
16   three   primary   colors   from   the   sample   and   hold
17   register and the gamma reference voltages for the
18   three primary colors from the gamma multiplexer,
19   and   outputting   calibrated   image   signals   of   the
20   three primary colors, respectively; and
21   three   buffers   respectively   receiving   the   calibrated
22   image   signals   of   the   three   primary   colors   from
23   the   three   digital-to-analog   converters,   in   the
24   sequence of the primary colors.

1   2.   A data driver of a display forming an image frame
2   by sequentially scanning horizontal lines, the data driver
3   comprising:

4   a shift register receiving image data of three primary
5   colors in serial and outputting the image data of
6   the three primary colors in parallel within each
7   of scan durations of the horizontal lines;
8   a sample and hold register acquiring the image data of
9   the three primary colors from the shift register;
10   a first multiplexer receiving the image data of the
11   three primary colors from the sample and hold
12   register and outputting them in a sequence of the
13   primary colors within each of the scan durations
14   of the horizontal lines;
15   a second multiplexer outputting gamma reference
16   voltages for the three primary colors in the
17   sequence of the primary colors within each of the
18   scan durations of the horizontal lines;
19   a digital-to-analog converter for gamma calibration,
20   receiving the image data from the first
21   multiplexer and the gamma reference voltages from
22   the second multiplexer, and outputting calibrated
23   image signals of the three primary colors; and
24   a buffer receiving the calibrated image signals from
25   the digital-to-analog converter and outputting
26   the calibrated image signals in the sequence of
27   the primary colors. .

1   3.   A data driver of a display forming an image frame
2   by sequentially scanning horizontal lines, the data driver
3   comprising:
4   a shift register receiving and outputting image data of
5   the three primary colors in a sequence of the

-12-

6   primary colors within a scan duration of one of

7   the horizontal lines;

8   a sample and hold register acquiring the image data

9   from the shift register;

10 a gamma multiplexer outputting gamma reference voltages

11   for the primary color in the sequence of the

12   primary colors;

13 a digital-to-analog converter for gamma calibration,

14   receiving the image data from the sample and hold

15   register and the gamma reference voltages from

16   the gamma multiplexer, and outputting calibrated

17   image signals of the three primary colors; and

18 a buffer receiving the calibrated image signals from

19   the digital-to-analog converter and outputting

20   the calibrated image signals in the sequence of

21   the primary colors.

1   4.   A data driver of a display forming an image frame

2 composed of sub-frames of three primary colors by

3 sequentially scanning horizontal lines for each sub-frame,

4 the data driver comprising:

5   a shift register receiving and outputting image data of

6   one of the three primary colors within each of

7   scan durations of the horizontal lines;

8   a sample and hold register acquiring the image data

9   from the shift register;

10 a gamma multiplexer outputting gamma reference voltages

11   for the primary color to which the image data

12   from the shift register belongs;

13   a digital-to-analog converter for gamma calibration,
14   receiving the image data from the sample and hold
15   register and the gamma reference voltage from the
16   gamma multiplexer, and outputting a calibrated
17   image signal; and
18   a buffer receiving the calibrated image signal from the
19   digital-to-analog converter.